

US008189611B2

(12) United States Patent

Liang et al.

(54) SYSTEM AND METHOD FOR RESOLVING CONTENTION AMONG APPLICATIONS REQUIRING DATA CONNECTIONS BETWEEN A MOBILE COMMUNICATIONS DEVICE AND A WIRELESS NETWORK

- (75) Inventors: Kenneth Liang, Kanata (CA);
 Mahmud-Ul Hassan, Kanata (CA);
 Colin Ho, Kanata (CA)
- (73) Assignee: Research In Motion Limited, Waterloo (CA)
- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 304 days.
- (21) Appl. No.: 12/326,446
- (22) Filed: Dec. 2, 2008

(65) **Prior Publication Data**

US 2009/0080457 A1 Mar. 26, 2009

Related U.S. Application Data

- (63) Continuation of application No. 11/267,538, filed on Nov. 4, 2005, now Pat. No. 7,474,671.
- (51) Int. Cl.

H04J 3/02 (2006.01)

- (52) **U.S. Cl.** **370/462**; 455/452.1; 455/452.2; 455/435.2; 455/435.3

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,781,955	B2 *	8/2004	Leung	370/232
2003/0037146	A1*	2/2003	O'Neill	709/226
2004/0023646	A1*	2/2004	Inami et al.	455/418

(10) Patent No.: US 8,189,611 B2

(45) **Date of Patent:** May 29, 2012

2004/0052212	A1*	3/2004	Baillargeon 370/235
2004/0224668	A1*	11/2004	Shell et al 455/412.1
2005/0021876	A1*	1/2005	Asai et al 710/1
2005/0070290	A1*	3/2005	Baggstrom et al 455/445
2009/0059785	A1*	3/2009	Jogalekar et al 370/230

FOREIGN PATENT DOCUMENTS

2526396	1/2012
1387593	2/2004
1783961	4/2008
1924037	4/2010

CA

EP

EP

EP

(Continued)

OTHER PUBLICATIONS

Chinese First Office Action; Application No. 200610064046.5; State Intellectual Property Office of People's Republic of China; dated Jan. 15, 2010; 9 pgs.

(Continued)

Primary Examiner — Barry W Taylor

(74) *Attorney, Agent, or Firm* — The Danamraj Law Group, P.C.

(57) **ABSTRACT**

A mobile communications device (30) includes a wireless transceiver (34) operable to conduct at least two data connections between the mobile communications device (30) and a wireless network (12) wherein each of the data connections is associated with a connected application operating on the mobile communications device. A processor (32) is coupled to the wireless transceiver (34). The processor (32) is operable to process a request for a data connection for an unconnected application operable on the mobile communications device (30), to release one of the data connections associated with one of the connected applications and to establish a data connection between the mobile communications device (30)and the wireless network (12) for the unconnected application. A contention manager (86) is operable to select the connected application to be released based upon a comparison of a contention parameter associated with each of the connected applications.

25 Claims, 5 Drawing Sheets



Find authenticated court documents without watermarks at docketalarm.com.

FOREIGN PATENT DOCUMENTS

EP	2184946	5/2010
SG	131920	2/2009
WO	2004061638 A2	7/2004

OTHER PUBLICATIONS

Australian First Examiner's Report; Application No. 2006235810; IP Australia; dated Mar. 2, 2010; 1 pgs.

Canadian Office Action; Application No. 2,567,115; Canadian Intellectual Property Office; dated Mar. 11, 2010; 4 pgs.

European Patent Office Extended Search Report, Application No. 10155276.8, European Patent Office, dated Apr. 13, 2010, 7 pgs.

Chinese Office Action, Application No. 20100800460540, China IPO, dated Aug. 23, 2010; 5 pgs.

European Search Report, Application No. 08151703.9, European Patent Office, dated Apr. 14, 2008, 7 pgs.

Taiwan, Search Report, Taiwan Patent Office, dated Sep. 20, 2010, 1 pg.

European Search Report Application No. 05256859.9; European Patent Office; Mar. 20, 2006; 6 pages.

Xu et al.; "QoS and Contention-Aware Multi-Resource Reservation"; 2000; IEEE; pp. 3-10.

"Digital Cellular Telecommunications System (Phase 2+); Universal Mobile Telecommunications System (UMTS); General Packet Radio Service (GPRS); Service Description; Stage 2 (3GPP TS 23.060 version 6.8.0 Release 6)"; Mar. 2005; Technical Specification; pp. 1-212.

"Digital Cellular Telecommunications System (Phase 2+); Universal Mobile Telecommunication System (UMTS); Mobile Radio Interface Layer 3 Specification; Core Network Protocols; Stage 3 (3GPP TS 24.008 version 6.8.0 Release 6)"; Mar. 2005; Technical Specification; pp. 1-518.

CA Office Action, Application No. 2,567,115, Canadian IPO, Mar. 31, 2011, 2 pgs.

DOCKE

RM

CN Office Action, Application No. 200610064046.5, Chinese IPO, Mar. 9, 2011, 2 pgs.

EPO, Communication Under Rule 51(4), Application No. 05256859. 9, Oct. 15, 2007, 41 pgs.

EPO, Communication Under Rule 71(3) EPC, Application No. 08151703.9, Sep. 10, 2009, 6 pgs.

EPO, Communication Under Rule 71(3) EPC, Application No. 10155276.8, Feb. 24, 2011, 6 pgs.

Hong Kong IPD, Certificate of Grant of Patent (HK1102880), Application No. 07111229.3, Jun. 6, 2008, 2 pgs.

IP Australia, Notice of Acceptance, Application No. 2006235810, Nov. 1, 2010, 3 pgs.

KIPO, Office Action, Application No. 10-2011-0027211, May 17, 2011, 6 pgs.

SIPO, Notification of Grant of Rights for Invention Patent, Application No. 200610064046.5, Jul. 26, 2011, 2 pgs.

KR Office Action, Application No. 10-2006-0108315, Korean IPO, Jan. 26, 2011, 3 pgs.

JPO, Notice of Reasons for Rejection, Application No. 2006-297339, Sep. 13, 2011, 4 pgs.

KIPO, Notice of Final Rejection, Application No. 10-2006-0108315, Sep. 30, 2011, 5 pgs.

KIPO, Notice of Final Rejection, Application No. 10-2011-0027211, Sep. 30, 2011, 5 pgs.

EPO, Communication Pursuant to Article 94(3) EPC, Application No. 10153005.3, Feb. 1, 2012, 6 pgs.

KIPO, Notice of Decision for Patent, Application No. 10-2006-0108315, Dec. 13, 2011, 3 pgs.

KIPO, Notice of Decision for Patent, Application No. 10-2011-0027211, Dec. 13, 2011, 3 pgs.

SIPO, Second Office Action, Application No. 201010576392.8, Mar. 16, 2012, 1 pg.

CIPO, Office Action, Application No. 2,567,115, dated Apr. 5, 2012, 2 pgs.

* cited by examiner

CKF'

Α

R

 \mathbf{O}

Α





DOCKET A L A R M Find authenticated court documents without watermarks at <u>docketalarm.com</u>.

Δ



Fig.3

DOCKET



Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time** alerts and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.

